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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,337	08/23/2001	Karl-Heinz Krah	41110	8132

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EXAMINER

JEFFERY, JOHN A

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 08/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/935,337

Applicant(s)

KRAH, KARL-HEINZ

Examiner

John A. Jeffery

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-34 and 45-51 is/are allowed.
- 6) ☒ Claim(s) 1 and 3-10 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☒ Claim(s) 11-16, 35-44 and 52-72 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Restriction Requirement Traversal

Applicant's election with traverse of Species A and Subspecies 1 in Paper No. 6 is acknowledged. The traversal is on several ground(s). First, applicant argues that Subspecies 1 and 2 are "sufficiently related" and allegedly "should be examined together." Remarks, Page 2. Applicant further argues that there is allegedly no divergent subject matter because "both Subspecies relate to embedding a heating element in a meltable member." Remarks, Page 3. Applicant next alleges that examining Species A and B together purportedly would not impose a serious burden on the examiner because "[e]xamining a heating element secured in a meltable member by a fastener would not impose an extra burden...in addition to examining a heating element secured in a meltable member without a fastener." Remarks, Pages 3-4. Lastly, applicant argues that examining the combination and subcombination comprising Species B would allegedly not impose a serious burden on the examiner since they are "sufficiently related." Remarks, Page 4.

Applicant's argument with respect to Species A and B is not found persuasive because each species has attained a separate status in the art. As noted in the restriction requirement, the species are patentably distinguished from each other in the securing of the heating element with a fastener. Restriction Requirement, Page 2. Securing a resistive heating element with fasteners is considered by those skilled in the art as having a separate status in the art from electrically heated electrofusion joint forming apparatus generally. Applicant is respectfully referred to Class 219, subclass

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542 entitled "...With Resistive-Element Attaching, Securing, or Electrical Insulation Means." (emphasis added.) However, subclass 535 of Class 219 is entitled "Specially Formed or Adapted to Fit Material to be Heated (e.g., a pipe)" and is one of the classifications generally recognized as appropriate for electrically heated electrofusion joint forming apparatus in general. Not only is there a clear recognized separate status in the electric heating art, each species also inherently gives rise to a separate field of search despite some overlap in the field of search. Thus, contrary to applicant's assertion, there is, in fact, a serious burden on the examiner to examine both species together.

Similarly, applicant's argument in connection with Subspecies 1 and 2 is also not persuasive in view of the separate status in the art recognized for each subspecies. A representative example of such recognition is found in the individual subclasses 535 and 544. Subspecies 1 is more appropriately classified in Subclass 535 ("Specially Formed or Adapted to Fit Material to be Heated (e.g., a pipe)"), and Subspecies 2 is more appropriately classified in subclass 544 ("Element Embedded Within or Completely Surrounded by Core, Sheath, or Support Means"). Moreover, not only is there a clear recognized separate status in the electric heating art, the two subspecies also inherently give rise to a separate field of search despite some overlap in the field of search. Thus, contrary to applicant's assertion, there is, in fact, a serious burden on the examiner to examine both subspecies together.

Finally, applicant's argument regarding the combination/subcombination restriction is noted, but not found to be persuasive for the reasons stated in the

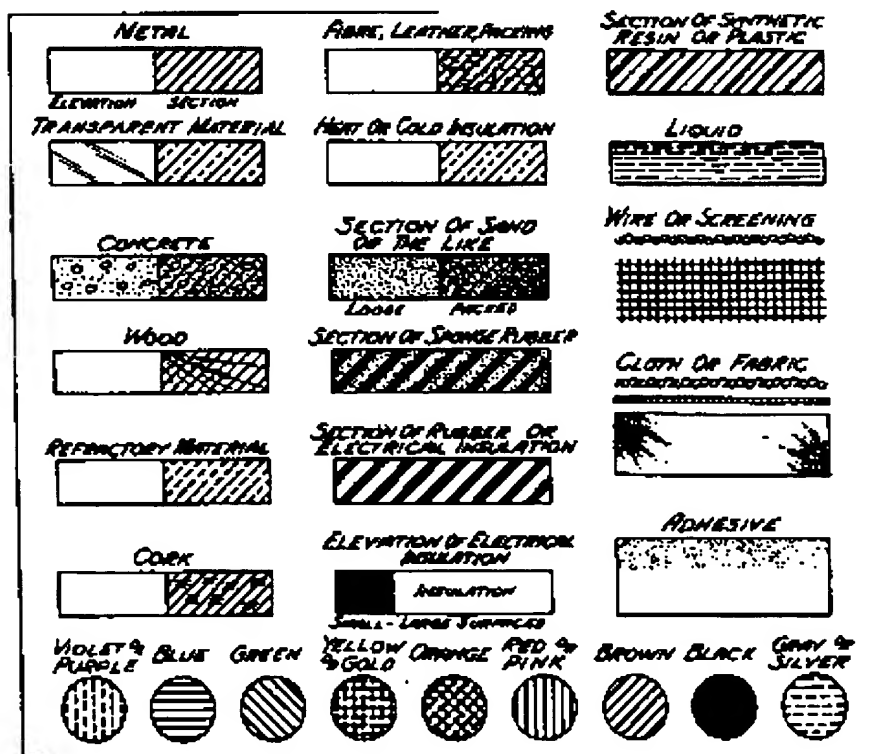
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Restriction Requirement. The 2-pronged test for patentable distinctness has been met, namely (1) the combination as claimed does not require the particulars of the subcombination, and (2) the subcombination has separate utility. The requirement is still deemed proper and is therefore made FINAL.

Drawings

The drawings are objected to because of the following informalities:

Fig. 1-3, 5-8, 10-16: Proper cross-sectional hatching is required to properly denote plastic materials in accordance with MPEP 608.02 (see the drawing below for proper hatching examples).



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The response to this action must include a separate letter addressed to the examiner and contain: (1) sketches showing *in red* the drawing changes required above and (2) a request that the examiner approve the changes as shown on the sketches.

IMPORTANT NOTE: The filing of new formal drawings to correct the noted defect may be deferred until the application is allowed by the examiner, but the print or pen-and-ink sketches with proposed corrections in red ink is required in response to this office action, and *may not be deferred*.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 6-8 are rejected under 35 USC 102(b) as being anticipated by JP9-257183. JP9-257183 discloses an electrofusion joint assembly comprising "meltable member" 1 and an electric heating element 4 secured to the meltable member by "fastener" 9. Compare Figs. 6 and 7. See abstract and computer English translation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art

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are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP9-257183 in view of GB939664. The claims differ from the previously cited prior art in calling for the heating element to be S-shaped and V-shaped. Providing an S-shaped electric heating element disposed on a cylindrical substrate is conventional and well known in the art as evidenced by GB939664 noting Fig. 7. Moreover, a comparison of Figs. 6 (wound heater) and Fig. 7 suggests to one of ordinary skill in the art that a wound heater can be replaced with an S-shaped heater. In view of GB939664, it would have been obvious to one of ordinary skill in the art to replace the wound heater with an S-shaped heater so that more heat per unit area is obtained by zigzagging the heating element, thereby more uniformly heating the cylinder. Regarding claim 4, no criticality is seen in the use of a V-shaped element in lieu of an S-shaped element in view of both elements' serpentine configuration providing higher heat density per unit length. Moreover, the selection of a V-shaped element in lieu of an S-shaped element would constitute a mere engineering design preference well within the level of one of ordinary skill in the art. Regarding claim 8, no criticality is seen in the degree of taper claimed and its choice would be the mere result of routine experimentation. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233,235 (CCPA 1955).

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Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP9-257183 in view of GB939664 and further in view of Nakao (US5324920). The claim differs from the previously cited prior art in calling for securing the heating element at each bend of the element. Securing an S-shaped heating element at each bend of the element is conventional and well known in the art as evidenced by Nakao (US5324920) noting fasteners 14 that secure the sinuous elements at each bend. See Figs. 2, 4, and 5 and col. 5, lines 8-32. By mounting the sinuous heater at spaced intervals at each bend, there is more freedom for the elements to thermally expand and contract during use. In view of Nakao (US5324920), it would have been obvious to one of ordinary skill in the art to mount the sinuous heater at spaced intervals at each bend, thereby allowing the elements more freedom to thermally expand and contract during use.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP9-257183 in view of Wise (US3788928). The claim differs from the previously cited prior art in calling for a pipe with a spigot end. Pipes with spigot ends in pipe joining apparatus are conventional and well known in the art as evidenced by Wise (US3788928) noting pipe 10 with spigot end that mates with a corresponding pipe 12. In view of Wise (US3788928), it would have been obvious to one of ordinary skill in the art to provide a pipe with spigot end in the previously described apparatus so that a pipe was provided adapted to mate with the other pipe to be welded.

Allowable Subject Matter

Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 17-34 and 45-51 are allowable over the art of record.

Other Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The art should be both separately considered and considered in conjunction with the previously cited prior art when responding to this action. US 087, JP 018, US 334, US 308 disclose electrofusion assemblies relevant to the instant invention. DE 940, JP 118, EP 788 disclose heating element securement means relevant to the instant invention.

Conclusion

Any inquiry concerning this or earlier communications from the examiner should be directed to John A. Jeffery at telephone number (703) 306-4601 or fax (703) 305-3463. The examiner can normally be reached on Monday-Thursday from 7:00 AM to 4:30 PM EST. The examiner can also be reached on alternate Fridays.

The fax phone numbers for the organization where this application or proceeding is assigned are:

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Before Final	(703) 872-9302
After Final	(703) 872-9303
Customer Service	(703) 872-9301

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0861.



**JOHN A. JEFFERY
PRIMARY EXAMINER**

8/4/03